Results: The body mass index (BMI) in this population was normally distributed around a mean of 32.1 kg/m2. The prevalence of foot pain was 55.1%. There was a positive association between BMI and foot pain (odds ratio (OR) 1.12, 95% CI 1.06, 1.17). Foot pain was also positively associated with fat mass (OR 1.05, 95% CI 1.02, 1.08) and fat mass index (FMI) (OR1.16, 95% CI 1.06, 1.28) adjusted for age, gender, strenuous physical activity, and skeletal muscle mass or fat-free mass index (FFMI) respectively. When examining fat distribution, positive associations were observed for android/total body fat ratio (OR 1.40, 95% CI 1.08, 1.81) and android/gynoid fat ratio (OR 28.18, 95% CI 2.04, 389.70), though gynoid/total body fat ratio was inversely related to foot pain (OR 0.83, 95% CI 0.74, 0.94). Skeletal muscle mass and FFMI were not associated with foot pain when adjusted for fat mass or FMI respectively.
Conclusions: Increasing BMI, specifically android fat mass, is strongly associated with foot pain and disability. This may imply both biomechanical and metabolic mechanisms.

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EVALUATION OF SHOULDER PERIARTICULAR TISSUES IN PATIENTS WITH OSTEOARTHRITIS USING THE TENDON INDEX OF THE SHOULDER JOINT

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Purpose: To determine the feasibility of using the tendon index of the shoulder joint to assess the destruction of periarticular tissues of the shoulder joint in patients with osteoarthritis
Methods: The study involved 20 patients with osteoarthritis complained of pain in the shoulder joint. To assess pain were used VAS in quiescent state, in motion, and palpation. Assessment of the shoulder joint was carried out on the Constant Score. To evaluate the objective status used the tendon index of the shoulder joint, which included assessment of pain on a scale (0–3) during movements, causing the tension of the rotator cuff tendons (rotator cuff) and the long head biceps (Long head of the biceps tendon). Statistical data was carried out using Spearman's test.
Results: there was a marked correlation between the tendon index of the shoulder joint and VAS after palpation (r = 0.4), between the tendon index of the shoulder joint and VAS after joint motion (r = 0.3) as well as between the tendon index of the shoulder joint and the Constant Score (r = −0.6).
Conclusions: The tendon index of the shoulder joint can be used to assess the pathology of periarticular tissues of the shoulder joint in patients with osteoarthritis.

Table: Correlation between the tendon index of the joint and VAS and Constant Score

	VAS after palpation	VAS after joint motion	Constant Score
Tendon index of the shoulder joint	r = 0.4, p < 0.05	r = 0.3, p < 0.05	r = −0.6, p < 0.05

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EARLY LEARNING EXPERIENCE WITH A NECK STABILIZED THA STEM FOR TREATING OSTEOARTHRITIS

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Purpose: Total hip arthroplasty is one of the most effective orthopaedic procedures with a very high success rate as measured by pain relief, improved function and patient satisfaction. However, since the introduction of total hip arthroplasty in the 1940s, a range of design philosophies for femoral components have demonstrated variable clinical results. Aseptic loosening, joint dislocation, thigh pain, bone resorption and femoral component failure have been some of the complications that plague this procedure. The past few years has seen an influx of so-called short stems with very little clarification as to design features, required surgical technique and long-term clinical outcomes. Most devices, meet with some level of learning curve and most systems do little in the way of warning new surgeons as to the pearls and pitfalls during the initial surgical phase. This paper is designed to review the lessons learned with a new neck stabilized implant stem during the first year of surgical experience.
Methods: Three surgeons at different centers implanted 200 stems. Two surgeons used the anterior single incision and one surgeon used a small posterior surgical approach. All stems were of a novel modular neck stabilized stem design concept. All were implanted with cementless acetabular components of four different designs and three different bearing surfaces. Intraoperative x-rays were taken on all patients undergoing the posterior approach and half of all anterior approach patients had intraoperative fluoroscopy or plain x-rays taken.
FEA studies were evaluated to determine best stem orientation and instrumentation designed and developed for surgical preparation of femoral stem.
Results: One stem has been revised due to sepsis and no stems have been revised due to aseptic loosening. One modular neck was adjusted due mechanical impingement with the acetabular component.
Surgical evaluation clearly demonstrates that there is no difficulty for access to the socket or proximal femur in utilizing a neck sparing stem design.
Radiographic review demonstrates 20° of internal rotation is needed for proper measurement of femoral offset and medial neck curve.
Intraoperative evaluation demonstrated the need for a smaller stem size in small profile female patients.
Surgical technique demonstrated three unique learning aspects of utilization of a curved small neck stabilized stem design. One: level of neck resection. Two: angle of neck resection. Three: rasping not broaching the proximal medial curve.
Conclusion: The initial first year results of a novel modular neck stabilized curved stem design clearly demonstrates that this approach can be used as a main stream treatment for the osteoarthritic patient.
The advantage of neck sparing stabilized stems saves tissue, both hard (bone) and soft tissue as compared to conventional cementless total hip stem designs. This new approach has the potential benefit of less blood loss, quicker rehabilitation and if necessary easier removal and restoration of revision surgery. We are encouraged with our initial clinical/surgical impression and believe the potential advantages warrant further evaluation of this new approach to THA.

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BONE MINERAL DENSITY IS CROSS SECTIONALLY ASSOCIATED WITH CARTILAGE VOLUME IN HEALTHY, ASYMPTOMATIC ADULT FEMALES: GEELONG OSTEOPOROSIS STUDY

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Purpose: The association between osteoporosis and osteoarthritis is controversial. Whilst previous studies have shown an association between bone mineral density (BMD) and cartilage volume to be positively associated, and some data exist of the relationship between local BMD and knee structures, the association between distant site-specific measures of BMD and other knee structures is unknown. The aim of this study was to determine the associations between BMD at